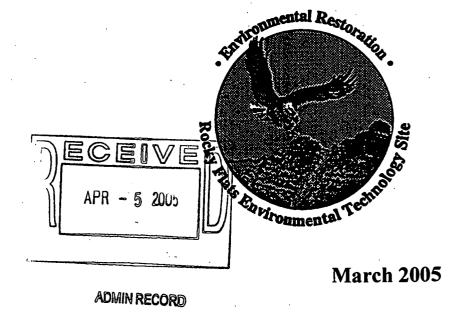


Environmental Restoration
RFCA Standard Operating Protocol
for Routine Soil Remediation
FY05 Notification #05-05
IHSS Group NE-1, PAC NW-1505
- the North Firing Range



Environmental Restoration
RFCA Standard Operating Protocol
for Routine Soil Remediation
FY05 Notification #05-05
IHSS Group NE-1, PAC NW-1505
- North Firing Range

Approval received from the U.S. Environmental Protection Agency, Region VIII

March 23, 2005

Approval letter contained in the Administrative Record.

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 IHSS GROUP NE-1, PAC NW-1505	5
2.1 Project Conditions	5
2.2 Subsurface Soil Risk Screen	
2.3 Remediation Plan	
2.4 Stewardship Evaluation	23
2.4.1 Proximity to Other Contaminant Sources	24
2.4.2 Surface Water Protection	
2.4.3 Monitoring	25
2.4.4 Stewardship Actions and Recommendations	
2.5 Accelerated Action Remediation Goals	
2.6 Treatment	26
2.7 RCRA Units and Intended Waste Disposition	26
2.8 Administrative Record Documents	26
2.9 Projected Schedule	27
3.0 PUBLIC PARTICIPATION	
4.0 REFERENCES	27
LIST OF FIGURES	
Figure 1 IHSS Group NE-1, PAC NW-1505 Location	2
Figure 2 IHSS Group NE-1, PAC NW-1505 Detailed Location	
Figure 3 IHSS Group NE-1, PAC NW-1505 Analytical Results Greater Than Background Means Plus Two Standard Deviations (Outer)	7
Figure 4 IHSS Group NE-1, PAC NW-1505 Analytical Results Greater Than Background Means Plus Two Standard Deviations (Inner)	8
LIST OF TABLES	
Table 1 IHSS Group NE-1, PAC NW-1505, Comparison of SW-846 6200 and SW-846 6010 Analytical Methods for Arsenic	4
Table 2 IHSS Group NE-1, PAC NW-1505, North Firing Range Analytical Results Greater Than Background Means Plus Two Standard Deviations	9

ACRONYMS

AL action level

bgs below ground surface
BMP best management practice

BZ Buffer Zone

CDPHE Colorado Department of Public Health and Environment—

COC contaminant of concern

D&D decontamination and decommissioning

DOE U.S. Department of Energy

EDDIE Environmental Data Dynamic Information Exchange

EPA U.S. Environmental Protection Agency

ER Environmental Restoration

ER RSOP Environmental Restoration RFCA Standard Operating Protocol for

Routine Soil Remediation

ft foot

FY Fiscal Year IA Industrial Area

IABZSAP Industrial Area and Buffer Zone Sampling and Analysis Plan

ICP inductively coupled plasma (spectrometry)
IHSS Individual Hazardous Substance Site

mg/kg milligram per kilogram
mg/L milligram per liter
NA not applicable

PAC Potential Area of Concern

PCOC potential contaminant of concern PDF Portable Document Format

POC Point of Compliance
POE Point of Evaluation

PU&D Property Utilization and Disposal

RAO remedial action objective

RCRA Resource Conservation and Recovery Act

RFCA Rocky Flats Cleanup Agreement

RFETS Rocky Flats Environmental Technology Site

RL reporting limit

RSOP RFCA Standard Operating Protocol

SAP Sampling and Analysis Plan

Site Rocky Flats Environmental Technology Site

SSRS Subsurface Soil Risk Screen
VOC volatile organic compound
WRW wildlife refuge worker
XRF x-ray fluorescence

1.0 INTRODUCTION

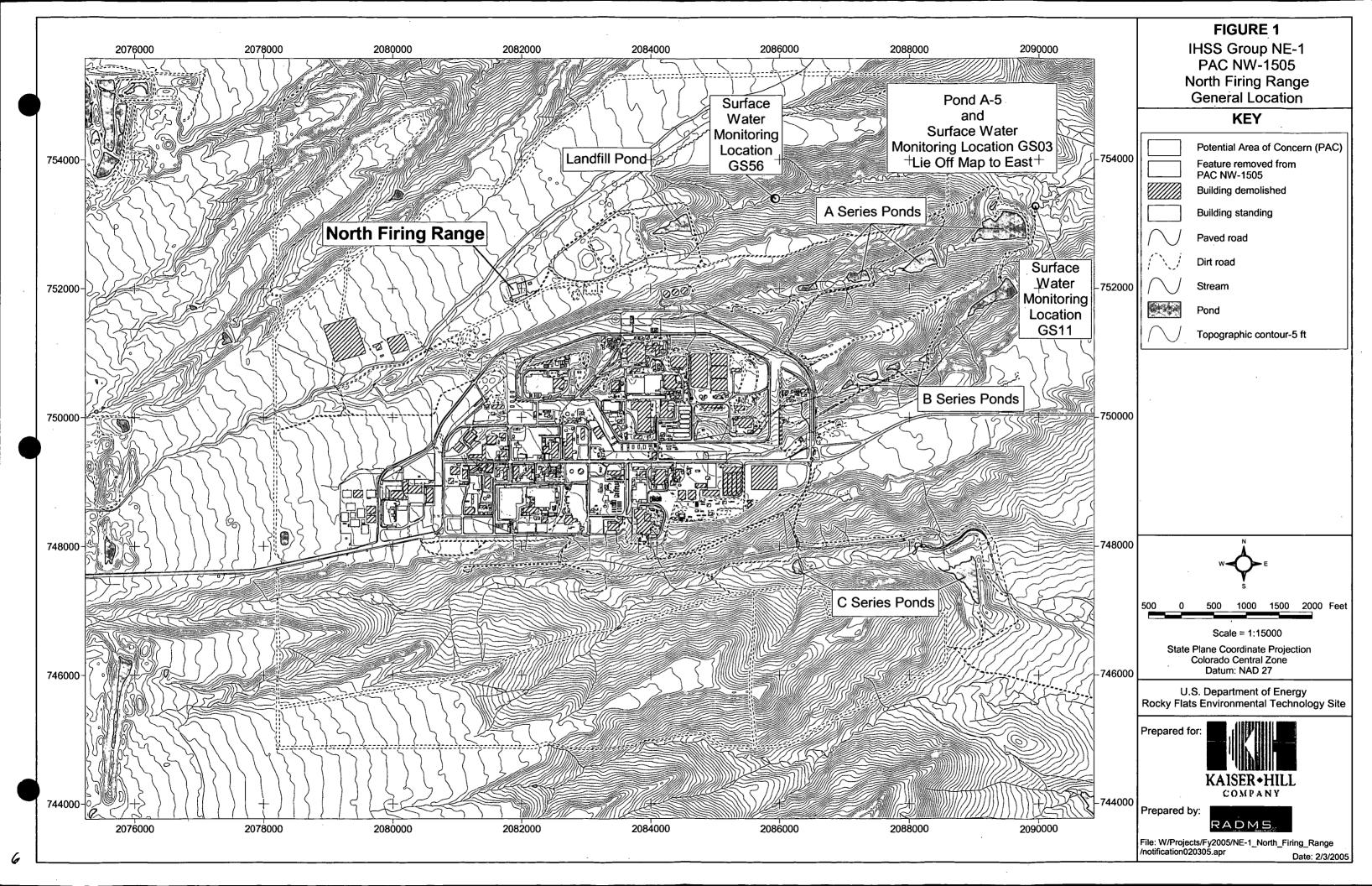
This Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) (DOE et al. 2003) Standard Operating Protocol (RSOP) for Routine Soil Remediation (ER RSOP) (DOE 2004a) Fiscal Year (FY) 2005 (FY05) Notification addresses the remediation of a Potential Area of Concern (PAC) in the Rocky Flats Environmental Technology Site (RFETS or Site) Buffer Zone (BZ) during FY05. The purpose of this Notification is to invoke the ER RSOP for Individual Hazardous Substance Site (IHSS) Group NE-1, PAC NW-1505, referred to as the North Firing Range. Activities specified in the ER RSOP are not reiterated here; however, deviations from the ER RSOP are included where appropriate.

The general location of the North Firing Range is shown on Figure 1, and details are shown on Figure 2. Accelerated action sampling was performed under Industrial Area (IA) and Buffer Zone-Sampling and Analysis Plan (SAP) (IABZSAP) Addendum—#IABZ-05-01 (DOE 2004b). Based on the accelerated action sampling, lead is the potential contaminant of concern (PCOC) at this site.

Soil with contaminant concentrations greater than the RFCA wildlife refuge worker (WRW) action levels (ALs), or as indicated by the Subsurface Soil Risk Screen (SSRS), and associated debris will be removed in accordance with RFCA (DOE et al. 2003) and the ER RSOP (DOE 2004a). The Corrective Action at Outdoor Shooting Ranges Guidance Document (CDPHE, 2005) was reviewed as part of accelerated action planning. It states on page 3 that, "Shooting ranges...subject to corrective action under a compliance order must be remediated in accordance with the applicable legal requirements." Since RFETS is subject to a compliance order (RFCA), the North Firing Range will be remediated using RFCA. The cleanup standard for lead in RFCA is 1000 milligram per kilogram (mg/kg). This standard is based on EPA's Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities (1994). As such, the action at the North Firing Range will be to remove the lead hot spots (greater than 1000 mg/kg) as waste.

Through the consultative process it was agreed that remediation for arsenic at concentrations greater than the RFCA WRW AL, when analyzed using the on-site SW-846 6200 method (on-site, x-ray fluorescence [XRF]), is not warranted. Arsenic concentrations determined using the SW-846 6200 method compared to the more accurate off-site SW-846 6010 method (off-site, inductively coupled plasma [ICP] spectrometry) are up to several orders of magnitude greater, as shown in Table 1. (Results listed in Table 1 are from eight original locations with comparative data and 16 additional samples collected by resampling existing locations.) Method SW-846 6010 results are given preference in tables and on figures. Method SW-846 6200 results are presented only in cases where they are the only available analytical data. In the case of arsenic only, SW-846 6200 analytical results will not result in accelerated action.

One of four original lead exceedances (location BV53-031, 1,540 milligrams per kilogram [mg/kg]); determined using the SW-846 6200 (XRF) method, was not confirmed when results determined by the preferred SW-846 6010 (ICP) method became available (equivalent location BV53-047, 650 mg/kg).



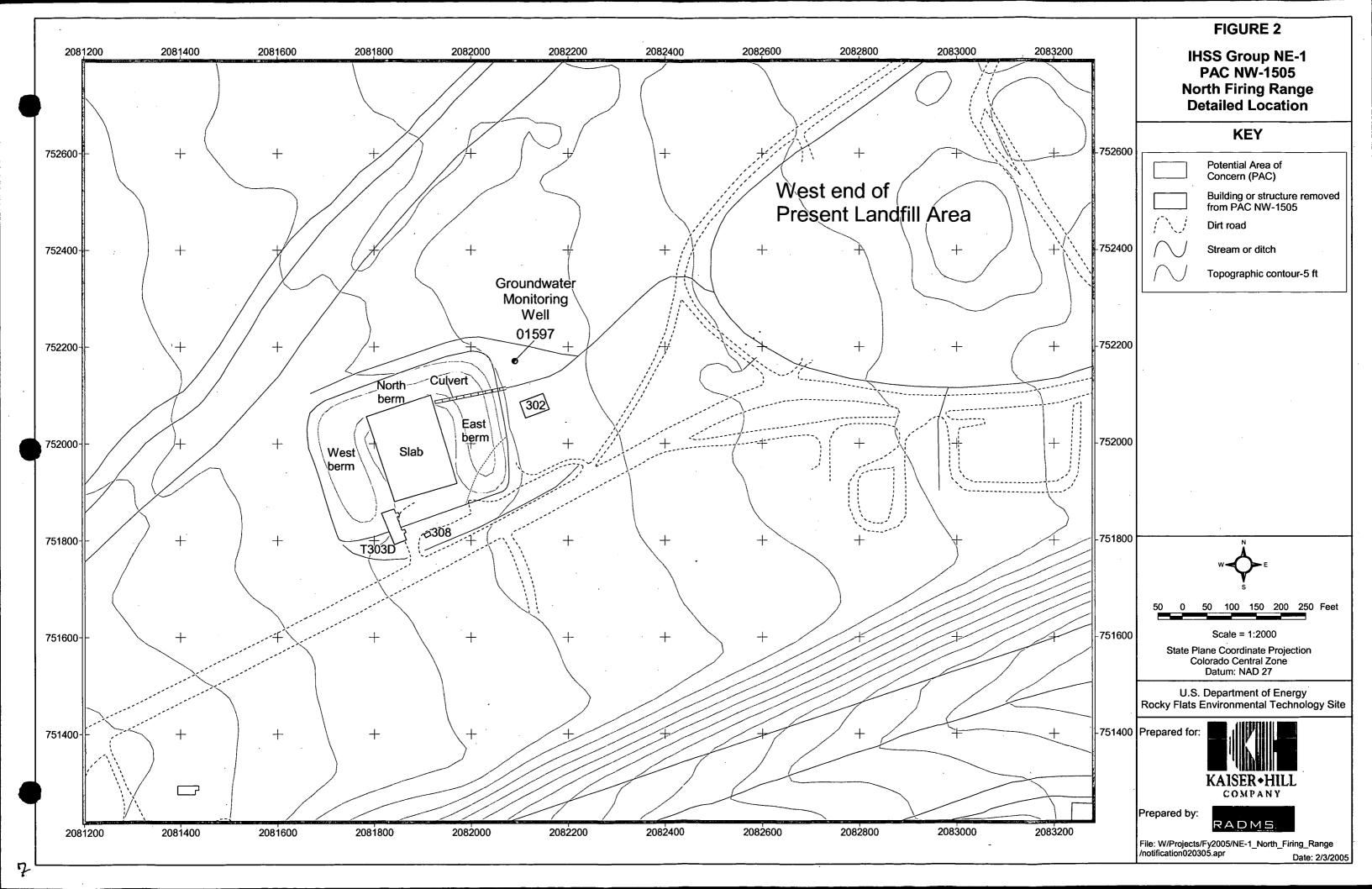


Table 1
IHSS Group NE-1, PAC NW-1505
Comparison of SW-846 6200 and SW-846 6010 Analytical Methods for Arsenic

Original	Original SW-846	Original	Equivalent	Additional	
Location	6200	SW-846	Additional	6010	
(Interval)	Result	6010 Result	Committee Commit	A COUNTY OF THE PARTY OF THE PA	Unit
BU53-000 #(A)	54.800	5.200	NA	NA	mg/kg
BU53-001 #(A)	22.300	5.000	NA ·	NA	mg/kg
BU53-001 #(B)	12.100	13.000	NA	NA	mg/kg
BV53-002 #(A)	10.000	NA	BV53-051	3.200	mg/kg
BV53-006 #(A)	41.400	5.900	NA	NA	mg/kg
BV53-009 #(A)	39.900	5.700	NA	NA ·	mg/kg
BV53-011 #(A)_	- 48.900	NA	BV53-044	3.900	mg/kg_
BV53-012 #(A)	38.800	5.600	NA	NA	mg/kg
BV53-017 #(A)	43.500	6.500	NA	NA	mg/kg
BV53-020 #(A)	36.700	NA	BV53-049	4.500	mg/kg
BV53-021 #(A)	45.500	NA	BV53-050	4.400	mg/kg
BV53-026 #(A)	46.900	NA	BV53-052	5.700	mg/kg
BV53-027 #(A)	29.800	NA	BV53-053	5.000	mg/kg
BV53-028 #(A)	50.800	NA	BV53-054	6.000	mg/kg
BV53-029 #(A)	839.000	NA	BV53-055	12.000	mg/kg
BV53-030 #(A)	97.700	NA .	BV53-046	2.600	mg/kg
BV53-031 #(A)	134.000	NA	BV53-047	3.700	mg/kg
BV53-034 #(A)	42.800	NA	BV53-048	4.000	mg/kg
BV53-043 #(A)	70.800	NA	BV53-045	4.600	mg/kg
BW53-001 #(A)	397.000	13.000	NA	NA	mg/kg
BW53-003 #(A)	14.900	NA	BW53-011	4.300	mg/kg
BW53-004 #(A)	60.600	NA	BW53-010	3.300	mg/kg
BW53-005 #(A)	19.100	NA	BW53-012	5.200	mg/kg
BW54-000 #(A)	23.000	NA	BW54-004	5.200	mg/kg

Bold font = surface soil WRW AL exceedance; arsenic WRW AL = 22.2 mg/kg

Interval A = 0.0-0.5 ft,

Interval B = 0.5-2.5 ft

NA = not applicable

Additional sample interval = 0.0-0.25 ft

Detection limit for all 6200 analyses = 10.0 mg/kg

Detection limit for all 6010 analyses $\leq 1.2 \text{ mg/kg}$

(Based on Global Positioning System coordinates for both locations, BV53-047 is approximately 0.19 ft (about 2.25 inches) from BV53-031.) Therefore, only three locations will be remediated.

2.0 IHSS GROUP NE-1, PAC NW-1505

This Notification covers areas of the North Firing Range requiring action, as indicated by the accelerated action soil data shown on Figures 3 and 4 and listed in Table 2. Note that IHSS Group NE-1 also includes Ponds A-1 through A-5, B-1 through B-5, and C-1 and C-2. Although shown on Figure 1, the ponds are addressed in separate documents.

Figures 3 and 4 and Table 2 present accelerated action results for the North Firing Range that are greater than background means plus two standard deviations or reporting. WRW AL exceedances for the accelerated action sampling are shown on Figures 3 and 4 (in red) and listed in Table 2 (in bold). Arsenic WRW AL exceedances determined by the SW-846 6200 method that will not result in accelerated action are shown in green on Figures 3 and 4 and have gray fill in Table 2.

2.1 Project Conditions

PAC NW-1505 consists of the RFETS North Firing Range. The range was constructed in 1983 and upgraded in 1994 and 1996. The principal firearms used at the range were pistols and rifles; however, machine guns up to 0.50 caliber and shotguns were also fired. Shotgun practice was confined to target shooting at paper silhouettes; no clay pigeons were used.

It appears from photographs that the south face of the north berm was cut back twice in the past (i.e. dug out to the north). Soil was excavated from the south face of the north berm for the first time during the 1994 upgrade to accommodate installation of a roof for the range and a mechanical target management system. The second excavation event occurred during the 1996 upgrade to accommodate additional space for a bullet trap mechanism behind the targets.

The concrete slab, range roof structure, target system, bullet trap, asphalt-paved parking area, buildings, and storage cargo containers at the North Firing Range have been removed as part of decontamination and decommissioning (D&D) (Figure 2).

Features remaining at the North Firing Range are the east, west, and north berms and the culvert beneath the northeastern corner of the berm area (Figure 2).

2.2 Subsurface Soil Risk Screen

An SSRS is performed when non-radionuclides and uranium are present in the soil at depths greater than six inches below ground surface (bgs), and when americium or plutonium is present at depths exceeding 3 ft bgs. Current site conditions are evaluated by the SSRS to determine whether remediation is required. Any accelerated actions performed, confirmation sampling results, and a revised SSRS will be documented in the IHSS Group NE-1, PAC NW-1505 Closeout Report. The SSRS follows the steps identified on Figure 3 of Attachment 5 of RFCA (DOE et al. 2003).

Screen 1 – Are contaminant of concern (COC) concentrations below RFCA Modification Table 3 soil ALs for the WRW?

Yes. Based on the accelerated action sampling, all subsurface metal concentrations were below the WRW ALs except for arsenic (see below). Ten locations (BU53-001,

BU53-002, BV53-038, BV53-039, BV53-040, BV53-041, BV53-042, BV54-000, BW54-002, and BW54-003, Figure 3) across the north side of the north berm were sampled from 0.5 to 2.5 feet and analyzed using the EPA SW-846 6200 method. Five locations exhibited arsenic concentrations greater than the WRW AL (BU53-001, BU53-002, BV53-041, BV53-042, and BV54-000). Because these arsenic results were derived from the SW-846 6200 method they will not be remediated. The PCOC, lead, was not detected above background means plus two standard deviations in any of the ten samples from these locations (including the associated surface samples) (Figure 3).

Screens 2 and 3 are not required if the answer to Screen 1 is "yes".

Screen 4 – Is there an environmental pathway and sufficient quantity of COCs that would cause an exceedance of surface water standards?

No. The North Firing Range does not lie within an area prone to landslides or high erosion, as shown on RFCA Attachment 5, Figure 1 (DOE et al. 2003).

Table 2
IHSS Group NE-1, PAC NW-1505, North Firing Range Analytical Results Greater Than Background Means Plus Two Standard Deviations

		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1								
								Start	End	
• • • • • • • • • • • • • • • • • • •	NT41	T			WRW AL	BK+2SD	Unit	Depth (ft)	Depth (ft)	Method
- Location	Northing	Easting	Analyte	Result					0.5	
BU52-000	752062.844	2081669.004	Barium	868.000	26400.000	141.260	mg/kg	0.0		SW-846 6200
BU52-000	752062.844	2081669.004	Chromium	43.800	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BU52-000	752062.844	2081669.004	Iron	38200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BU52-000	752062.844	2081669.004	Manganese	485.000	3480.000	365.080	mg/kg	0.0	0.5	SW-846 6200
BU52-000	752062.844	2081669.004	Nickel	47.300	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BU52-000	752062.844	2081669.004	Strontium	180.000	613000.000	48.940	mg/kg	0.0	0:5	SW-846 6200
BU52-001	752030.792	2081665.915	Arsenic	19.800	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Barium	867.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Chromium	60.500	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Iron	38000.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Manganese	464.000	3480.000	365,080	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Nickel	46.900	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Strontium	176.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BU52-001	752030.792	2081665.915	Vanadium	90.800	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BU53-000	752074.536	2081735.401	Aluminum	18000.000	228000.000	16902.000	mg/kg	0.0	0.5	SW-846 6010
BU53-000	752074.536	2081735.401	Copper	22.000	40900.000	18.060	mg/kg	0.0	0.5	SW-846 6010
BU53-000	752074.536	2081735.401	Lead	240.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6010
BU53-000	752074!536	2081735.401	Lithium	14.000	20400.000	11.550	mg/kg	0.0	0.5	SW-846 6010
BU53-001	752112.901	2081700.413	Aluminum	18000.000	228000.000	16902.000	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Arsenic	22.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Barium	808.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Chromium	42.500	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Iron	30600.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Nickel	38.100	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Strontium	205.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BÜ53-001	752112.901	2081700.413	Vanadium	87.500	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BU53-001	752112.901	2081700.413	Barium	622.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BU53-001	752112.901	2081700.413	Vanadium	103.000	7150.000	88.490	mg/kg	0.5	2.5	SW-846 6200
BU53-002	752124.348	2081730.201	Arsenic	37.900	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200

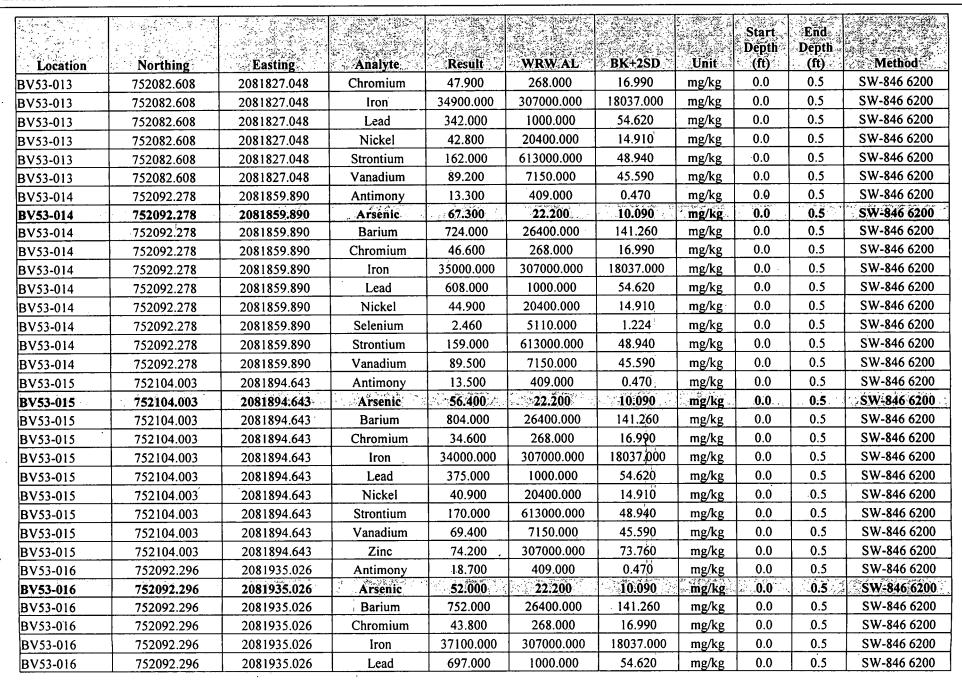
							4.	Start	End	
								. Depth	Depth	
Location	Northing	Easting	Anályte	Result	WRW AL	BK+2SD	Unit	(ft)	(ft)	Method
BU53-002	752124.348	2081730.201	Barium	842.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200.
BU53-002	752124.348	2081730.201	Chromium	42.500	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Iron	36100.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Nickel	47.300	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Strontium	187:000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Tin	12.900	613000.000	2.900	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Vanadium	82.200	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BU53-002	752124.348	2081730.201	Barium	402.000	26400.000	289.380	mg/kg	0.5	- 2.5	SW-846 6200
BU53-004	752091.024	2081679.633	Arsenic	.43.200	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Barium	849.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Chromium	44.900	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Iron	37200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633 ⁻	Lead	69.500	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Manganese	452.000	3480.000	365.080	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Nickel	45.600	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Strontium	183.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BU53-004	752091.024	2081679.633	Vanadium	92.000	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Arsenic	18.600	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Barium	821.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Chromium	37.300	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Cobalt	13.200	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Iron	42100.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Manganese	642.000	3480.000	365.080	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Nickel	58.200	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Strontium	245.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Vanadium	104.000	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-000	752109.120	2081745.274	Zinc	81.800	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-001	752117.909	2081780.264	Arsenic	22.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-001	752117.909	2081780.264	Barium	754.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-001	752117.909	2081780.264	Chromium	35.800	268.000	16.990	mg/kg	0.0	. 0.5	SW-846 6200
BV53-001	752117.909	2081780.264	Iron	35200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-001	752117.909	2081780.264	Nickel	44.900	20400.000	14.910	mg/kg	0.0	^0.5 ·	SW-846 6200

#05-05	
ç.	
Ġ.	
$\dot{\circ}$	
#	
=	
ō	
=	
ü	
,≌	
Ξ.	
≍	
ĭ	
Z	
S	
Ö	
>	
FY0.	
$\overline{}$	
\approx	
RS	
RSOP	
\simeq	
ER	
_	

(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	- -T	•]		\neg	_			35											<u>.</u>									\$\$\.				
Method	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6200	SW-846 6010	SW-846 6200									
End Depth (ft)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Starr Depth (ft)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	< 0.0 ×	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	00	0.0	0.0	0.0	0.0
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	- ga/gm	mg/kg																	
BK+2SD	48.940	10.090	141.260	16.990	18037.000	14.910	48.940	10.090	141.260	16.990	18037.000	14.910	48.940	10.090	141.260	16.990	18037.000	14.910	48.940	45.590	73.760	16902.000	0.470	16.990	18.060	54.620	14.910	- 10:000	141.260	16.990	10.910	18037.000
WRW.AL	613000.000	22:200	26400.000	268.000	307000.000	20400.000	613000.000	22.200	26400.000	268.000	307000.000	20400.000	613000.000	22.200	26400.000	268.000	307000.000	20400.000	613000.000	7150.000	307000.000	228000.000	409.000	268.000	40900.000	1000.000	20400.000	22.200	26400.000	268.000	1550.000	307000.000
Result	186.000	35.600	790.000	37.500	32500.000	43.100	185.000	27.300	765.000	52.200	35900.000	46.000	183.000	38.600	729.000	49.200	38800.000	52.700	219.000	96.100	77.100	18000.000	0.690	17.000	20.000	99.000	15.000	43:900	822.000	26.900	11.600	38700.000
Analyte	Strontium	Arsenic	Barium	Chromium	Iron	Nickel	Strontium	Arsenic	Barium	Chromium	Iron	Nickel	Strontium	Arsenic	Barium	Chromium	Iron	Nickel	Strontium	Vanadium	Zinc	Aluminum	Antimony	Chromium	Copper	Lead	Nickel	Arsenic · ·	Barium	Chromium	Cobalt	Iron
Easting	2081780.264	2081850.122	2081850.122	2081850.122	2081850.122	2081850.122	2081850.122	2081885:051	2081885.051	2081885.051	2081885.051	2081885.051	2081885.051	2081919.958	2081919.958	2081919.958	2081919.958	2081919.958	2081919.958	2081919.958	2081919.958	2081770.405	2081770.405	2081770.405	2081770.405	2081770.405	2081770.405	2081805.298	2081805.298	2081805.298	2081805.298	2081805.298
Northing	752117.909	752135.289	752135.289	752135.289	752135.289	752135.289	752135.289	752144.062	752144.062	752144.062	752144.062	752144.062	752144.062	752152.806	752152.806	752152.806	752152.806	752152.806	752152.806	752152.806	752152.806	752083.200	752083.200	752083.200	752083.200	752083.200	752083.200	752092.029	752092.029	752092.029	752092.029	752092.029
Location	BV53-001	BV53-003	BV53-003	BV53-003	BV53-003	BV53-003	BV53-003	BV53-004	BV53-004	BV53-004	BV53-004	BV53-004	BV53-004	BV53-005	BV53-006	BV53-006	BV53-006	BV53-006	BV53-006	BV53-006	BV53-007	BV53-007	BV53-007	BV53-007	BV53-007							

2M-846 6200	٤.0	0.0	ш8/кв	141.260	26400.000	000.928	Barium	2081827.048	752082.608	BA23-013
0079 9 1 8-MS	S :0	0.0	्रण8्र/हरू	060.01	002.22	\$2.800°°°	Sin921A	840.7281802	809:7807SL	BA23-013
0109 9 1 8-MS	٤.0	0.0	mg∕kg	029.42	000.0001	120.000	Lead	2081791.436	123.570227	BA23-015
0109 9 1 8-MS	٥.5	0.0	mg∕kg	090.81	40900.000	21.000	Copper	2081791.436	129.870287	BA23-015
0109 9 1 8-MS	č .0	0.0	шБ\кБ	996.0	000.126	086.0	Beryllium	2081791.436	129.870227	BA23-015
0109 9 1 8-MS	٥.0	0.0	ш8/кв	0.470	409,000	079.0	YnomitnA	2081791.436	129.870287	BA23-015
0109 948-WS	2.0	0.0	mg/kg	16902.000	228000.000	18000.000	munimulA	2081791.436	129.870287	BA23-015
SW-846 6200	₹.0 ·	0.0	ш8/кв	062.24	000.0217	006.28	muibanaV	2081910.042	152.8112 <i>2</i> 7	BA23-010
SW-846 6200	č. 0	0.0	ш8/кв	046,84	000.000£13	173.000	Strontium	2081910.042	152!8!12 <i>\$L</i>	BA23-010
SW-846 6200	٤.0	0.0	mg/kg	14.910	20400.000	45.500	Nickel	2081910.042	152.81122 <i>T</i>	BA23-010
SW-846 6200	٥.5	0.0	mg/kg	54.620	1000.000	122.000	Lead	2081910.042	152.81122 <i>T</i>	BA23-010
2W-846 6200	2.0	0.0	ш8/кв	18037.000	307000.000	35400.000	Iron	2081910.042	152.8112 <i>2</i> 7	BA23-010
2W-846 6200	2.0	0.0	mg/kg	066.91	268,000	40.000	Сһтотіит	2081910.042	152.811227	BA23-010
2W-846 6200	٤.0	0.0	ш8/кв	141.260	26400.000	748.000	Barium	2081910.042	152.811227	BA23-010
2W-846 6200	% 'S'0	0.0	Sy/8w	060:01	22:200	38.400	SinsenA	240.0191802	152.811227	BA23-010
0109 948-WS	2.0	0.0	тв/кв	029.48	1000.000	000.011	Lead	20.2781802	942.601227	BA23-009
0109 9t8-MS	٥.5	0.0	ш8/кв	996.0	000.126	1.000	Beryllium	20.2781802	948.60128 <i>T</i>	BA23-009
0109 948-WS	\$:0	0.0	ш8/кв	0.470	000.604	076.0	Antimony	270.2781802	948,601287	BA23-009
0109 9t8-MS	2.0	0.0	mg/kg	16902.000	228000.000	18000.000	munimulA	20.2781802	942.601227	BA23-009
SW-846 6200	5,0	0.0	mg/kg	046.84	000.000£13	178.000	Strontium	. \$12.0481802	197.001227	BA33-008
0079 9t8-MS	5,0	0.0	ш8/кв	. 016.41	20400.000	000.94	Nickel	2081840.215	497.001227	BV53-008
2W-846 6200	٥,5	0.0	ш8/кв	54.620	000.0001	225.000	Lead	212.0481802	497.001227	BA33-008
0029 948-WS	2.0	0.0	ш8/кв	18037,000	307000.000	34300.000	Iron	2081840.215	497.001227	BA23-008
0079 948-MS	2.0	0.0	ш8/кв	066 91	268.000	004.75	Chromium	2081840.215	497.001227	BA33-008
0079 9¢8-MS	2.0	0.0	mg/kg	141.260	. 000.00492	000.778	Barium	2081840.215	497.001227	BV53-008
0079.9 1 8-MS	`` S :0	0.0	8x/8m	060°01	75,200	₹ 009:9€	Arsenic	212.0481802	797.001227	BA23-008
0079 948-WS	2.0	0.0	ш8/кв	0.470	000.604	001.81	Antimony	2081840.215	49T.001S2T	BA23-008
0079 948-WS	٤.0	0.0	тв/кв	065.24	000.0217	004.26	muibensV	2081805.298	752092.029	700-ESV8
2M-846 6200	٤.0	0.0	тв∕кв	2.900	000.000£13	007.11	niT	2081805.298	752092.029	BV53-007
0029 948-WS	2.0	0.0	ш8/кв	046.84	000.000£13	184.000	Strontium	2081802	752092.029	BV53-007
0079 948-WS	2.0	0.0	ш8/кв	14.910	20400.000	004.64	Nickel	2081805.298	452092.029	BV53-007
2W-846 6200	2.0	0.0	ш8/кв	24.620	1000.0001	236.000	Lead	862.2081802	752092.029	BV53-007
Method	(11)	(11)	JinU	BK+72D	MEM YE.	^{[e} ∏usəX =]	Analyte	Easting	Northing	Location
	Depth	Depth								
	End	Janie								

_
7.7
7
١



		Tanggar #1.4 (48.78) \$			Asset Hall Free Control			Start Depth	End Depth	
Location	Northing	Easting	Analyte	Result	WRW:AL	BK+2SD	Unit	(ft)	(ft)	Method
BV53-016	752092.296	2081935.026	Nickel	49.200	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-016	752092.296	2081935.026	Strontium	176.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-016	752092.296	2081935.026	Tin	12.200	613000.000	2.900	mg/kg	0.0	0.5	SW-846 6200
BV53-016	752092.296	2081935.026	Zinc	83.000	307000.000	73.760 [†]	mg/kg	0.0	0.5	SW-846 6200
BV53-017	752060.145	2081787.132	Aluminum	22000.000	228000.000	16902.000	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Antimony	0.560	409.000	0.470	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Beryllium	1.100	921.000	0.966	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Chromium	18.000	268.000	16.990	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Copper	22.000	40900.000	18.060	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Lead	120.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Lithium	12.000	20400.000	11.550	mg/kg	0.0	0.5	SW-846 6010
BV53-017	752060.145	2081787.132	Nickel	15.000	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6010
BV53-018	752063.882	2081797.359	Antimony	22.400	409.000	0.470	_mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Arsenic	75.800	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882-	2081797.359	Barium	726.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Chromium	43.000	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Cobalt	11.400	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Iron	36100.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Lead	590.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Nickel	48.800	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Selenium	1.940	5110.000	1.224	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Strontium	168.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Vanadium	90.600	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-018	752063.882	2081797.359	Zinc	113.000	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Arsenic	38.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Barium	767.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BÝ53-019	752067.614	2081808.108	Chromium	43.400	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067:614	2081808.108	Cobalt	12.100	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Iron	38800.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Nickel	51.400	20400.000	14.910,	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Strontium	177.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-019	752067.614	2081808.108	Vanadium	87.400	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200

								Start Depth	End Depth	
Location	Northing	Easting	Analyte	Result	WRW AL	BK+2SD	Unit	(ft)	(ft)	Method
BV53-019	752067.614	2081808.108	Zinc	80.100	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Arsenic	37.100	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Barium	775.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Chromium	36.900	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Cobalt	11.700	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Iron	34000.000	307000.000	18037.000	mg/kg	0.0	0,.5	SW-846 6200
BV53-022	752079.080	2081844.167	Nickel	44.500	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Strontium	179.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-022	752079.080	2081844.167	Vanadium	84.700	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Arsenic	43.100	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Barium	683.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Chromium	35.500	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Cobalt	12.500	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Iron	37500.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Nickel	49.700	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Strontium	159.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Vanadium	105.000	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-023	752082.945	2081856.927	Zinc	78.900	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Arsenic	35.600	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Barium	722.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Chromium	49.700	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Cobalt	12.200	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Iron	38500.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Nickel	53.800	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Strontium	163.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-024	752087.534	2081868.507	Vanadium	91.600	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Arsenic	39.000	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-025	⁻ 752090.959	2081880.521	Barium	724.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Chromium	48.200	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Cobalt	11.100	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Iron	36500.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Lead	139.000	1000.000	54.620	mg/kg	0.0	0.5 -	SW-846 6200



		200	्रा । स्ट्रिक्ट स्थापन स्थापन द्वारा । इ.स. १९८७ - इ.स.	1971 - 2018 3719 - 11	The state of the s		ಗ್ರಾಜ್ಯಾಪ್ರಿಕ್ಷಗಳಿಗಳು ಪ್ರ	3 8 9,2-	77 mam 5	21350 97034756
							5.4	Start 🚴	End.	
		in the second of	Analyte	Result	.≂ WŘW∗AL	≫BK+2SD	Unit	Depth (ft)	Depth (ft)	Method:
Location	Northing	Easting 2081880.521	Nickel	48.100	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521	Strontium	172.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959		Vanadium	74.500	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081880.521 2081880.521	Zinc	81.300	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-025	752090.959	2081878.812	Arsenic	70.600	22.200	10.090	mg/kg/	0.0	0.5	SW-846 6200
BV53-032	752015.676		Barium	767.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Chromium	48.900	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	.2081878.812	 	37800.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Iron		1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Lead	562.000 47.100	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Nickel		5110.000	1.224	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Selenium	2.660	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Strontium	168.000		45.590		0.0	0.5	SW-846 6200
BV53-032	752015.676	2081878.812	Vanadium	88.200	7150.000 22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-033	752023.755	2081913.418	Arsenic	33.200			mg/kg	 	0.5	
BV53-033	752023.755	2081913.418	Barium	545.000	26400.000	141.260	mg/kg	0.0		SW-846 6200
BV53-033	752023.755	2081913.418	Chromium	21.300	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-033	752023.755	2081913.418	Iron	19200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-033	752023.755	2081913.418	Lead	143.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BV53-033	752023.755	2081913.418	Nickel	22.900	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-033	752023.755	2081913.418	Strontium	142.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Arsenic	253.500	22.200	10.090	mg/kg	-0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Barium	743.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Chromium	35.800	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Iron	38100.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Lead	190.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Nickel	48.400	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Strontium	.160.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Tin	10.800	613000.000	2.900	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Vanadium	101.000	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-035	752040.642	2081855.312	Zinc	75.700	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Antimony	27.300	409.000	0.470	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Arsenic	131.000	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200

ER RSOP FY05 Notification #05-05

	1.2 SE 1821 CON THE							Start	End	
								Depth	Depth	
Location	Northing	Easting	Analyte.	Result	WRW AL	BK+2SD	Unit	(ft)	(ft)	Method
BV53-036	752049.114	2081889.829	Barium	712.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Chromium	42.400	268.000	16.990 ^f	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Iron	35900.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Lead	1680.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Mercury	2.800	25200.000	0.134	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Nickel	42.700	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Selenium	11.600	5110.000	1.224	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Strontium	160.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-036	752049.114	2081889.829	Vanadium	69.500	7150.000	45.590	mg/kg	· 0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Barium	679.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Chromium	35.900	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Iron	36100.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Nickel	49.100	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Selenium	20.900	5110.000	1.224	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Vanadium	92.500	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-037	752057.533	2081924.764	Zinc	100.000	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Arsenic	17.500	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Barium	834.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Chromium	38.000	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Iron	36200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Nickel	44.300	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Strontium	175.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Vanadium	85.700	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-038	752134.503	2081763.078	Barium	856.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BV53-039	752147.567	2081795.547	Arsenic	15.500	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Barium	712:000	26400.000	141.260 -	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Chromium	47.200	268.000	16.990 -	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Cobalt	11.200	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Iron	37500.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Nickel	50.900	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Strontium	164.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-039	752147.567	2081795.547	Vanadium	83.800	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200

S.
5

			SV COLUMN CONTRACTOR CONTRACTOR	*** · · · · · · · · · · · · · · · · · ·	medicina pod at a supportation of a finite) ::. record -praisis August 20	a Larren II. Ganzosii	Sept. 200001	garanting on the State	999909X80*********************
								Start	End	
								Depth	Depth .	
~Location	Northing	Easting "	- Analyte	Result	WRW AL	BK+2SD	Unit	· (ft) · .		Method
BV53-039	752147.567	2081795.547	Arsenic	19.900	22.200	13.140	mg/kg	0.5	2.5	SW-846 6200
BV53-039 -	752147.567	2081795.547	Barium	792.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BV53-039	752147.567	2081795.547	Vanadium	114.000	7150.000	88.490	mg/kg	0.5	2.5	SW-846 6200
BV53-040	752158.121	2081827.759	Arsenic	21.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Barium	780.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Chromium	48.700	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Iron	37200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Nickel	49.000	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Strontium	169.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	. 2081827.759	Vanadium	105.000	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-040	752158.121	2081827.759	Arsenic	15.800	22.200	13.140	mg/kg	0.5	2.5	SW-846 6200
BV53-040	752158.121	2081827.759	Barium	590.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BV53-041	752168.151	2081858.501	Arsenic	24.700	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Barium	958.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Chromium	50.100	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Cobalt	12.300	1550.000	10.910	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Iron	40400.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168:151	2081858.501	Nickel	54.000	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168:151	2081858.501	Strontium	244.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Vanadium	87.200	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-041	752168.151	2081858.501	Barium	760.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BV53-041	752168.151	2081858.501	Vanadium	91.800	7150.000	88.490	mg/kg	0.5	2.5	SW-846 6200
BV53-042	752179.559	2081891.857	Arsenic	27.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Barium	794.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Chromium	41.300	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	· Iron	33800.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Nickel	42.800	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Strontium	194.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Vanadium	79.800	7150.000	45.590	mg/kg	0.0	0.5	SW-846 6200
BV53-042	752179.559	2081891.857	Barium [']	615.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BV53-044	752048.533	2081760.295	Antimony	0.920	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-044	752048.533	2081760.295	Lead	88.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010

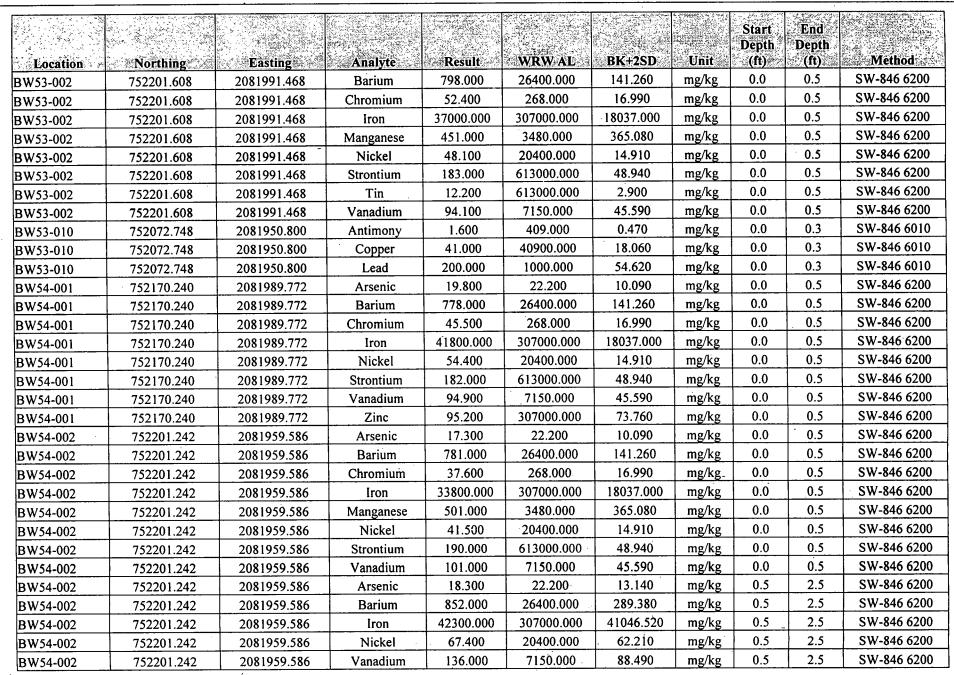
ER RSOP FY05 Notification #05-05

								Start	End	
								Depth	Depth	
Location	Northing	Easting	Analyte	Result	WRW ALU.	BK+2SD	Unit	" (ft)	(ft)	Method
BV53-045	752022.768	2081769.805	Aluminum	17000.000	228000.000	16902.000	mg/kg	0.0	0.3	SW-846 6010
BV53-045	752022.768	2081769.805	Antimony	1.500	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-045	752022.768	2081769.805	Copper	29.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-045	752022.768	2081769.805	Lead	440.000	1000.000	54.620,	mg/kg	0.0	0.3	SW-846 6010
BV53-046	751997.513	2081807.246	Copper	26.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-046	751997.513	2081807.246	Lead	68.000	1000.000	54.620.	mg/kg	0.0	0.3	SW-846 6010
BV53-047	752006.703	2081845.118	Antimony	1.500	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-047	752006.703	2081845.118	Copper	20.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-047	752006.703	2081845.118	Lead	650.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-048	752031.504	2081820.146	Antimony	0.750	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-048	752031.504	2081820.146	Copper	34.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-048	752031.504	2081820.146	Lead	210.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-049	752072.623	2081819.529	Antimony	1.200	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-049	752072.623	2081819.529	Lead	110.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-049	752072,623	2081819.529	Tin	22.000	613000.000	2.900	mg/kg	0.0	0.3	SW-846 6010
BV53-050	752075.844	2081831.666	Antimony	2.600	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-050	752075.844	2081831.666	Copper	65.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-050	752075.844	2081831.666	Lead	440.000	- 1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-050	752075.844	2081831.666	Mercury	0.340	25200.000	0.134	mg/kg	0.0	0.3	SW-846 6010
BV53-050	752075.844	2081831.666	Tin	3.100	613000.000	2.900	mg/kg	0.0	0.3	SW-846 6010
BV53-051	752126.706	2081815.103	Antimony	0.660	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-052	752095.858	2081892.105	Antimony	1.900	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-052	752095.858	2081892.105	Copper	250.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-052	752095.858	2081892.105	Lead	290.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-053	752099.592	2081906.349	Antimony	1.400	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-053	752099.592	2081906.349	Copper	48,000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-053	752099.592	2081906.349	Lead	210.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Aluminum	17000.000	228000.000	16902.000	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Antimony	3.400	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Chromium	19.000	268.000	16.990	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Copper	140.000	40900.000	18.060	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Lead	520.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010

ER RSOP FY05 Notification #05-05

[·• ·/ ·				are the metric of the second	25. Kan 1.685 Set 91			ক্ষাত্র প্রত্যাক্ষ্		16879 DC 18801996 - 18 9 V. 52 32
								Start	End	
								Depth	Depth	
Location	Northing	Easting	Analyte	Result	WRW AL	BK+2SD	Unit	(ft)	(ft)	Method
BV53-054	752100.874	2081914.156	Nickel	16.000	20400.000	14.910	mg/kg	0.0	0.3	SW-846 6010
BV53-054	752100.874	2081914.156	Tin	3.800	613000.000	2.900	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Antimony	38.000	409.000	0.470	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Arsenic	12.000	22.200	10.090	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Copper	5200.000	40900.000	18.060'	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Lead	6200.000	1000.000	54.620	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Selenium	1.400	5110.000	1.224	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073,505	2081935.635	Tin	14.000	613000.000	2.900	mg/kg	0.0	0.3	SW-846 6010
BV53-055	752073.505	2081935.635	Zinc	430.000	307000.000	73.760	mg/kg	0:0	0.3	SW-846 6010
BV54-000	752189.857	2081923.550	Arsenic	22.400	22.200,	10.090	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Barium	742.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Chromium	44.800	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Iron	40300.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Manganese	446.000	3480.000	365.080	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Nickel	47.500	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Strontium	184.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BV54-000	752189.857	2081923.550	Barium	645.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BW53-000	752126.936	2081944.960	Arsenic	21.300	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BW53-000	752126.936	2081944.960	Barium	804.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BW53-000	752126.936	2081944.960	Chromium	38.300	268.000	. 16.990	mg/kg	0.0	0.5	SW-846 6200
BW53-000	752126.936	2081944.960	Iron	34300.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BW53-000	752126.936	2081944.960	Nickel	45.500	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BW53-000	752126.936	2081944.960	Strontium	189.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BW53-001	752114.494	2082072.144	Antimony	16.000	409.000	0.470	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Arsenic	13.000	22.200	10.090	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Chromium	19.000	268.000	16.990	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Copper	1100.000	40900.000	18.060	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Lead	3500.000	1000.000	54.620	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Selenium	1.300	5110.000	1.224	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Tin	4.500	613000.000	2.900	mg/kg	0.0	0.5	SW-846 6010
BW53-001	752114.494	2082072.144	Zinc	720.000	307000.000	73.760	mg/kg	0.0	0.5	SW-846 6010
BW53-002	752201.608	2081991.468	Arsenic	18.100	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200

25
- 1



								Start	End	
Location	Northing	Easting * 2 *	Analyte	Result :::	WRW.AL	BK+2SD	Unit	Depth (ft)	Depth (Method
BW54-003	752199.769	2081994.951	Arsenic	16.600	22.200	10.090	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Barium	807.000	26400.000	141.260	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Chromium	50.300	268.000	16.990	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Iron	35200.000	307000.000	18037.000	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Manganese	411.000	3480.000	365.080	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Nickel	44.500	20400.000	14.910	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Strontium	169.000	613000.000	48.940	mg/kg	0.0	0.5	SW-846 6200
BW54-003	752199.769	2081994.951	Barium	817.000	26400.000	289.380	mg/kg	0.5	2.5	SW-846 6200
BW54-003	752199.769	2081994.951	Vanadium	102.000	7150.000	88.490	mg/kg	0.5	2.5	SW-846 6200
BW54-004	752161.619	2081955.022	Aluminum	18000.000	228000.000	16902.000	mg/kg	0.0	0.3	SW-846 6010
BW54-004	752161.619	2081955.022	Beryllium	0.970	921.000	0.966	mg/kg	0.0	0.3	SW-846 6010

mg/kg = milligrams per kilogram

Bold font = WRW AL exceedance

Gray fill = arsenic WRW AL exceedance determined by SW-846 6200 method

Furthermore, lead as the PCOC is not a subsurface soil issue at the North Firing Range. No other COCs are associated with this PAC that could potentially cause an exceedance of surface water standards. Nearby volatile organic compound (VOC) contamination of groundwater is attributed to the Property Utilization and Disposal (PU&D) Yard Plume and will not be addressed by this project.

2.3 Remediation Plan

The accelerated action objectives include the following:

- Remove three areas (Figures 3 and 4) of the North Firing Range containing lead contamination greater that the WRW AL. After the Accelerated Action Ecological Screening Evaluation (AAESE) is complete, a decision whether additional soil removal is warranted based on the AAESE will be made. If additional soil removal is not warranted, the berms will be flattened and spread out to create a low mound. The inner faces of the berms that may have been more impacted by bullets will be placed, as possible, on top of the current ground surface inside the berms. The outer berm material will be placed over this layer. If additional soil removal is warranted an AAESE notification will be developed.
- Remove the culvert in the northeastern corner of the North Firing Range and associated soil containing lead contamination greater than the WRW AL at either end of the culvert and along the culvert excavation.
- Where contaminated soil is removed, collect confirmation soil samples in accordance the IABZSAP (DOE 2004c).

Residual berm material will be used for fill at the project site or elsewhere at RFETS. The project site will be regraded to match the preexisting grade. Accelerated action activities will be conducted in consultation with the U.S. Environmental Protection Agency (EPA) and Colorado Department of Public Health and Environment (CDPHE).

It is anticipated that after remediation there may be areas with concentrations of metals greater than background means plus two standard deviations, but below RFCA WRW ALs.

2.4 Stewardship Evaluation

Because the full extent of excavation and remediation is not known at this time, an additional stewardship evaluation will be conducted during remediation using the consultative process; this will be documented in the North Firing Range Closeout Report. A map will be provided showing the remediated areas, and a new map of residual contamination will be generated after remediation.

The following sections present the stewardship evaluation.

2.4.1 Proximity to Other Contaminant Sources

The PCOC at the North Firing Range is lead, and lead concentrations are not surface water or groundwater issues. Nearby VOC contamination of groundwater is attributed to the PU&D Yard Plume and will not be addressed by this project.

2.4.2 Surface Water Protection

Surface water protection includes several considerations; as discussed below.

Is there a pathway to surface water from potential erosion to streams or drainages?

Yes. The immediate area of the North Firing Range does not lie within zones of high erosion or landslide probability as shown on RFCA Attachment 5 Figure 1 (DOE et al. 2003). Most surface water from the North Firing Range area exits along a drainage ditch that runs east from the mouth of the culvert underlying the east berm (Figure 2). Additional drainage (primarily from the former parking, storage container, and range office area) occurs north into the dirt drainage ditch on the side of the road adjacent to the North Firing Range. This water tends to remain trapped in the ditch until it either evaporates or flows into the groundwater system. Unusual rains may result in overland sheet flows to the east from the ditch area toward the drainage from the corrugated metal pipe. Maps indicate these two drainages merge in a flat area at the western end of the Present Landfill. From the western end of the Present Landfill surface water is artificially directed around either side of the Landfill, reemerging east of the Landfill dam downstream in the No Name Gulch drainage.

Best management practices (BMPs) will be employed during accelerated action to minimize erosion caused by land disturbance.

Do characterization data indicate there are contaminants in surface soil?

Yes. Accelerated action sampling indicates the presence of lead in surface soil in excess of the WRW AL at the North Firing Range (Figures 3 and 4 and Table 2).

Do monitoring results from Points of Evaluation (POEs) or Points of Compliance (POCs) indicate there are surface water impacts from the area under consideration?

No. The closest monitoring POE for the North Firing Range is surface water monitoring station GS56, located 1,350 feet (ft) east of the Present Landfill Pond (4,000 ft east of the North Firing Range) on No Name Gulch (Figure 1). Surface water directed around the Present Landfill is first monitored at this location. Further downstream the closest POC is surface water monitoring station GS03, on Walnut Creek at Indiana Street.

Downstream POE surface water monitoring station GS56 in No Name Gulch had a total lead exceedance of 0.0085 milligram per liter (mg/L) on March 25, 2003. (The surface water AL is 0.0065 mg/L.) On March 26, 2003, another sample was collected that contained 0.0013 mg/L of lead. Results from 10 subsequent sampling events following the March 25, 2003 exceedance, did not exceed the lead background (0.00658 mg/L) through the end of June 2004 (the last available analytical results to date). In 12 sampling events between March 17, 2003, and June 29, 2004, surface water at GS56 exceeded the AL for aluminum on three occasions (March 25 and April 14, 2003, and June 29, 2004).

It is difficult to associate analytical results from GS03 with any specific part of the GS03 drainage because the source area covers the entire IA and water is pumped from one sub-drainage into another. Based on RFETS Environmental Media Management Automated Surface-Water Monitoring Highlights from the Second Quarter of FY2003 through the Fourth Quarter of FY2004, discharges through GS03 met all stream standards and were below reporting thresholds for all analytes.

Is the IHSS Group in an area with high erosion potential?

No. The North Firing Range is not within the area of high erosion potential shown on Attachment 5 Figure 1 (DOE et al. 2003).

2.4.3 Monitoring

Monitoring includes the following considerations:

Do monitoring results from POEs or POCs indicate there are groundwater impacts from the area under consideration?

No. Currently there are no groundwater wells that monitor the North Firing Range. Groundwater well 01597 was located off the northeastern corner of the North Firing Range; however, there is no analytical data available from that location, and the well has been abandoned (Figure 2). The closest active wells monitor the PU&D Yard VOC Plume that extends from these wells to the east-northeast (DOE 2004d).

Can the impact be traced to a specific IHSS Group?

No. The PCOC at the North Firing Range is lead, and lead concentrations are not a groundwater issue. Nearby VOC contamination of groundwater is attributed to the PU&D Yard Plume and will not be addressed by this project.

Are additional monitoring stations needed?

No.

Can existing monitoring locations be deleted of additional remediation is conducted?

No. Existing monitoring locations cannot be deleted, because they are monitoring other contamination from outside the North Firing Range.

2.4.4 Stewardship Actions and Recommendations

The current stewardship actions and recommendations for the North Firing Range are as follows:

- Use BMPs to reduce erosion into surface water drainage.
- Implement near-term institutional controls until final closure and stewardship decisions are implemented, including the following:
 - Restrict access; and
 - Control soil excavations through the Site Soil Disturbance Permit process.
- Implement long-term stewardship actions, including the following:

- Prohibitions on construction of buildings in the area;
- Restrictions on excavations or other soil disturbances; and
- Prohibitions on groundwater pumping in the area of the North Firing Range.

These recommendations may change based on in-process remediation activities and other future RFETS remediation decisions.

2.5 Accelerated Action Remediation Goals

ER RSOP remedial action objectives (RAOs) include the following:

- Provide a remedy consistent with the RFETS goal of protection of human health and the environment;
- Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls; and
- Minimize the spread of contaminants during implementation of accelerated actions.

2.6 Treatment

Not applicable.

2.7 RCRA Units and Intended Waste Disposition

Not applicable.

2.8 Administrative Record Documents

CDPHE, 2005, Corrective Action at Outdoor Shooting Ranges Guidance Document, Hazardous Materials and Waste Management Division, Version One, January.

DOE, 2004, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Modification 2, Rocky Flats Environmental Technology Site, Golden, Colorado, August.

DOE, 2004, Industrial Area and Buffer Zone Sampling and Analysis Plan Addendum #IABZ-05-01 IHSS Group NE-1, PAC NW-1505 (North Firing Range), Rocky Flats Environmental Technology Site, Golden, Colorado, November.

DOE, 2004, Industrial Area and Buffer Zone Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE, 2004, Third Quarter RFCA Groundwater Monitoring Report for Calendar Year 2004, Rocky Flats Environmental Technology Site, Golden, Colorado, December.

DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and

Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

U.S. EPA, 1994, Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities.

2.9 Projected Schedule

Remediation of the North Firing Range is expected to begin in the second quarter of FY05.

3.0 PUBLIC PARTICIPATION

ER RSOP Notification #05-05 activities will be discussed at the March 2005 ER/D&D Status meeting. A Portable Document Format (PDF) version of this Notification was provided to the local governments. This Notification is available at the Rocky Flats Reading Rooms and on the Environmental Data Dynamic Information Exchange (EDDIE) Website at www.rfets.gov/eddie.

4.0 REFERENCES

CDPHE, 2005, Corrective Action at Outdoor Shooting Ranges Guidance Document, Hazardous Materials and Waste Management Division, Version One, January.

DOE, 2004a, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Modification 2, Rocky Flats Environmental Technology Site, Golden, Colorado, August.

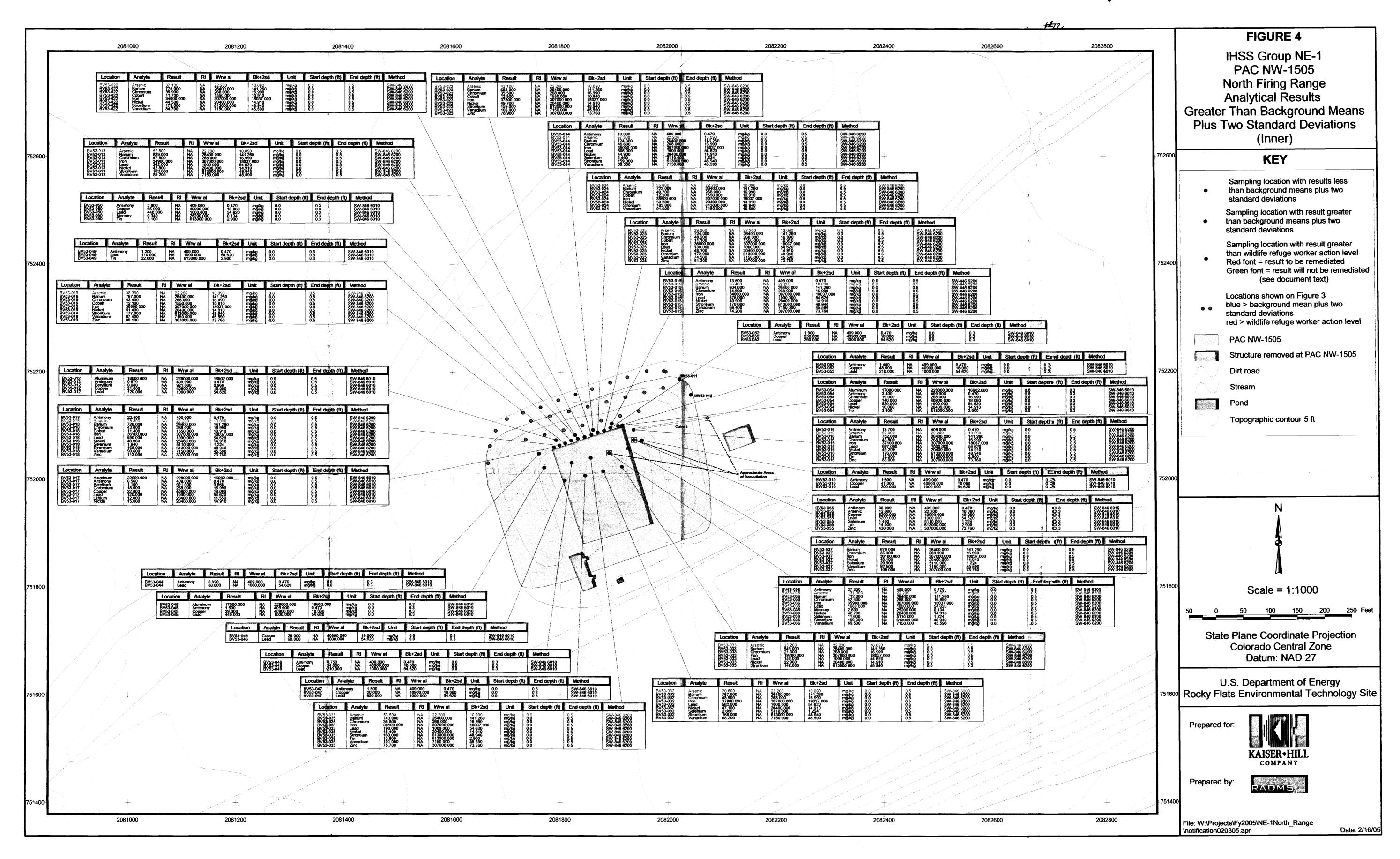
DOE, 2004b, Industrial Area and Buffer Zone Sampling and Analysis Plan Addendum #IABZ-05-01 for IHSS Group NE-1, PAC NW-1505 (North Firing Range), Rocky Flats Environmental Technology Site, Golden, Colorado, November.

DOE, 2004c, Industrial Area and Buffer Zone Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, May.

DOE, 2004d, Third Quarter RFCA Groundwater Monitoring Report for Calendar Year 2004, Rocky Flats Environmental Technology Site, Golden, Colorado, December.

DOE, CDPHE, and EPA, 2003, Modifications to the Rocky Flats Cleanup Agreement Attachment, U.S. Department of Energy, Colorado Department of Public Health and Environment, and U.S. Environmental Protection Agency, Rocky Flats Environmental Technology Site, Golden, Colorado, June.

U.S. EPA, 1994, Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities.



BZ-A-000836